

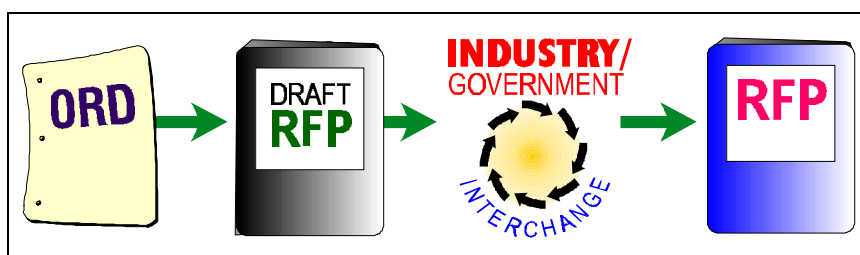
## 7. Convey the Requirements

This chapter describes how warfighter requirements are articulated and disseminated to industry using the principles developed by the Partnership Process. The goal of this activity area is to create a final Request for Proposal (RFP) that clearly conveys the warfighter's requirements and reflects the insight of our industry partners.

In particular, this chapter covers the following topics:

- Understanding the new process
- Understanding the key concepts
- The step-by-step process

### 7.1 Understanding the New Process



**Figure 7-1. Convey Requirements Process Flow.** During the convey requirements activity area, we create open interchange between government and industry to move from an Operational Requirements Document (ORD) to a final RFP.

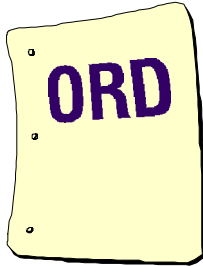
#### 7.1.1 Creating a Partnership to Convey Requirements

The Partnership Process has developed ways to help industry create the best solutions to warfighter deficiencies and allows all industry participants to participate in the bidding process on a level playing field.

*We have changed the way we create RFPs and how we convey our requirements to industry.*

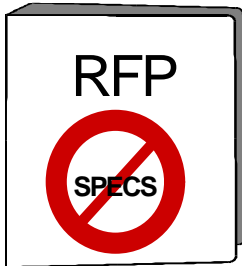
We have changed the way we create RFPs and how we convey requirements to industry. Now, industry can better show how their solutions address the needs of the warfighter and clearly indicate the effects of time and schedule constraints.

In the previous chapter, we discussed how the warfighter's quantified deficiency is translated into an Operational Requirements Document (ORD), which specifies the kind of solution we want for that deficiency. Once these needs are clearly defined and established, government and industry must work together to find the optimal solution.



The information contained in the ORD provides the baseline for every part of conveying requirements. When we enter the convey requirements activity area, the ORD becomes a systems requirement document (SRD), which describes the problem and requirements in the same manner as the ORD but uses contractually binding language.

In keeping with our policy of openness and partnership, the government provides industry with all of the tools and information it will need to prepare a full response to the warfighter's needs. In addition to the SRD, we provide industry with our acquisition strategy, the Statement of Objectives (SOO), evaluation criteria, the modeling and simulation toolset, and the threat and scenarios library we have used to understand the deficiency and quantify the requirements.



Industry and government continue to exchange information and refine the definition of the warfighter's needs using a draft RFP as a discussion vehicle and a way to confirm the mechanics of the proposal process. This refinement results in a final RFP that formally states the warfighter's requirements and the contractual terms of the government/industry relationship.

### 7.1.2 Providing Open Access to Information

The new approach to conveying requirements demands that industry have access to the information the government has used to quantify the mission deficiency and establish the warfighter's requirements.

The following are particular ways we will ensure open access to information:

- Evaluation criteria
- Early industry involvement
- RFPs based on military worth
- Modeling and simulation toolset
- Formal relationship between government and industry

Report Card
A = \$\$\$\$\$
B = \$\$\$\$
C = \$\$\$
D = \$
F = 0

## Evaluation Criteria

This is also an education and learning period. Industry will want to know how its proposals will be evaluated and how actual performance will be assessed should it be awarded a contract. This is an important new element insofar as we have traditionally been reluctant to fully communicate the criteria used in RFP evaluations.

Consequently, industry also receives evaluation criteria that convey how the government will evaluate proposals and provide incentives for exceeding thresholds. These evaluation criteria indicate how the government will assess and reward aspects of the proposal such as technical content, past performance, performance within the threshold to objective range, and other parameters.

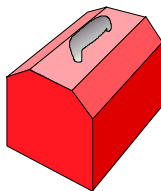
## Early Industry Involvement

The requirements information conveyed to industry at this point should not come as any surprise because industry representatives have been informed and active throughout the process of problem definition. Because of interchanges that have occurred throughout the problem definition phase, industry has a very clear idea of what the government is looking for, and the government has a good idea of potential industry solutions.

## RFPs Based on Military Worth

Another new process is using military worth as the basis for the RFP. The RFP will indicate how industry should demonstrate how they will attain the required military worth, how linkages are established from system and technical attributes to campaign objectives, and how modeling and simulation analyses will be used to validate military worth claims.

## Modeling and Simulation Toolset



The means through which contractor knowledge of how a solution is to be evaluated in terms of the new Military Worth Method is the digital system model (DSM). The bidder must create a model of a solution and ensure its compatibility with the government's prescribed modeling and simulation toolset.

Specific requirements for DSMs will vary from program to program, but it is critical that the interfaces conform to a standard so the DSMs can work with government threat models and military worth aggregations. Government may incentivize industry to use a standard architecture internal to the DSMs, but there may be cases where both industry and government will require proprietary

elements in the DSM (for example, new technology that only has proprietary models).

### **Formal Relationship Between Government and Industry**

One object of this openness and free access to information is to ensure that industry understands the deficiency well enough to provide an innovative and appropriate solution.

In particular, the goal of this part of the process is to ensure that industry can do the following:

- Understand the Military Worth Method.
- Describe the performance of their solution in terms of  $P_k$  grids that are compatible with the governments modeling and simulation set.
- Support their DSM with material that validates the accuracy of their proposal.

When industry has had a chance to become comfortable with these expectations, industry and government can enter a formal relationship. That is, we can solicit proposals for solutions that will lead to a contract award.

### **7.1.3 Understanding Conveying Requirements by DoD 5000 Phase**

Conveying requirements happens during every phase of an acquisition, from concept exploration through production. Figure 7-2 indicates the tasks that are specific to each phase. The principles we discuss in this chapter provide guidance for participants in every phase.

*For more information on the expectations for industry proposals, see [Chapter 8](#), Select the Source.*

DoD 5000 Phase	Distinguishing Features of Each Phase
<b>Phase 0: Concept Exploration</b>	<ul style="list-style-type: none"> <li>• Typically multiple contractors</li> <li>• Mission Needs Statement (MNS)</li> <li>• Multiple solution classes</li> <li>• Data collection for potential solutions</li> </ul>
<b>Phase I: Program Definition and Risk Reduction</b>	<ul style="list-style-type: none"> <li>• Typically multiple contractors</li> <li>• ORD I</li> <li>• Solution class oriented</li> <li>• Risk reduction on system solution</li> </ul>
<b>Phase II: Engineering and Manufacturing Development</b>	<ul style="list-style-type: none"> <li>• Typically a few contractors</li> <li>• ORD II</li> <li>• System oriented</li> <li>• Risk reduction on design and manufacturing</li> </ul>
<b>Phase III: Production, Fielding/Deployment, and Operational Support</b>	<ul style="list-style-type: none"> <li>• Typically 1 to 2 contractors</li> <li>• ORD III</li> <li>• Quantity oriented</li> <li>• Quality tenets</li> </ul>

***Figure 7-2. Conveying Requirements by DoD 5000 Phase.** The specific activities involved in conveying requirements will vary depending on the phase of the acquisition, but the approach toward conveying requirements should be consistent.*

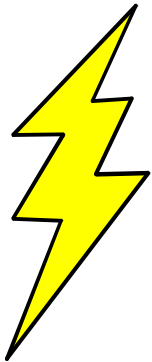
Regardless of the acquisition phase, the purpose of conveying requirements is to create government/industry interchange so that we can achieve the best solution for the warfighter.

## 7.2 Understanding the Key Concepts

### Breakthrough Concepts

- Prototype System Program Office
- Employ methods to reduce source selection time
- Develop methods to attain Best Solution
- Ensure fair consideration for commodity solutions
- Address strategies for integration issues

### 7.2.1 Implement Prototype System Program Office



The Partnership seeks to apply the principles described in Lightning Bolt #3 (SPO downsizing). The prototype System Program Office (SPO) described by this reform effort must optimally be very small and agile. Consequently, it will only have the resources to perform necessary tasks and will have to refuse to perform any tasks that do not add value to the desired result. The result of Lightning Bolt #3 is a toolbox of tenets that assist program managers in restructuring their programs to respond to the new, streamlined environment.

Some of these tenets are:

- Aggressive risk management is the expected way of doing business.
  - In other words, we will no longer practice risk avoidance, which often results in the performance of unnecessary inspections and oversight. We will institute a policy of risk management, which encourages quicker day-to-day decisions.
- Use insight rather than oversight.
  - In keeping with the Partnership's tenets, we will achieve a non-adversarial and trusting government/contractor relationship in order to eliminate duplicated efforts and permit people to work within their core competencies.

- Use industry processes, restrict government imposed specifications and standards, and allow contractor format.
  - We want to allow contractor processes to reduce the amount of paperwork and the number of personnel required to manage a program.
- Clearly define and communicate top-level, performance-based specifications/requirements to the contractor(s) prior to the contract award.
  - We want to define the most significant requirements for the system early in the process and ensure that the SPO, the user, and contractors agree to this list of requirements prior to contract award.

While some of these tenets apply to later stages of an acquisition, they should guide many of the decisions we make when we convey requirements. We need to plan the relationship between contractor and SPO from the formation of a SPO cadre. This will establish appropriate communications and create the most efficient interaction between the contractor and government for a particular program.

### 7.2.2 Employ Methods to Reduce Source Selection Time



Lighting Bolt #10 (reduce cycle time from requirement definition to contract award) provides us with significant guidance for finding the fastest way through the acquisition process. The Lightning Bolt #10 team is currently investigating this issue, and the Partnership plans to employ the methods they discover for reducing cycle time.

Some of their suggestions include:

- Reduce the size of RFPs and establish proposal page limitations.
- Simplify evaluation criteria by focusing on real discriminators.
- Use electronic source selection methods.
- Use oral presentations or oral proposals, when appropriate.

In addition, the Partnership's policy of open access to requirement data should accelerate the time required to go from ORD to RFP, since industry will be apprised of the requirement as government defines it.

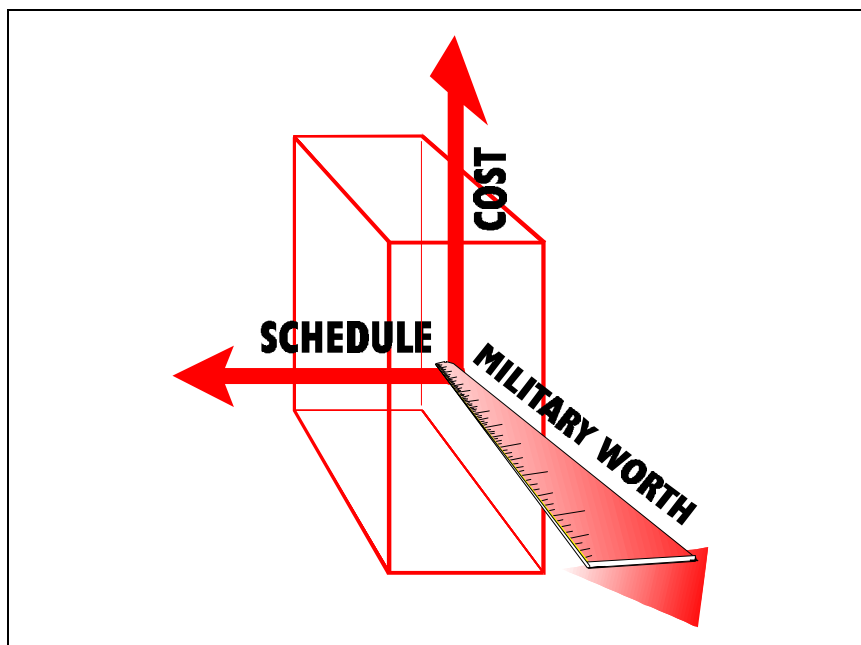
### 7.2.3 Develop Methods to Attain Best Solution

The Partnership has developed a disciplined method for describing an acquisition's trade space. This trade space is composed of three variables: cost, schedule, and military worth.

These three dimensions are first bounded in the ORD and are defined as follows:

- The military worth dimension is established by how much of the deficiency the warfighter wants to address given the solution space offered by industry.
- The cost dimension is defined by the warfighter's allocation of resources, which is influenced by concept exploration and the analysis of alternatives (AoA).
- The schedule dimension is defined by the warfighter's desired capability date, which is determined by the threat and scenario, and may be modified by forecasts of technical feasibility.

Because each variable in the proposed solution can be an independent variable—that is, can be assessed on its own terms and have its own threshold and objectives—the warfighter can receive the best solution based on the optimal mix of these variables as traded within specific constraints.



**Figure 7-3. Three-Dimensional Trade Space.** *We have developed methods to make trades between cost, schedule, and military worth so that we can achieve the best solution within certain constraints.*

In the past, systems were often evaluated only on performance—the solution must go this far, this fast—and the money or the schedule followed from the performance specifications. In other words, cost and schedule were dependent variables that were simply a function of the desired performance. Solutions procured in this manner were invariably expensive.

*The Partnership method protects the warfighter from overly expensive programs while creating effective solutions more quickly.*

The Partnership method recognizes that we can no longer afford to procure systems in this manner. As a result, all three variables must be traded within the constraints levied by a resource-limited EW environment.

Using this three-dimensional trade space to determine a solution allows decision makers to take into account the life cycle cost of the solution, including ownership and logistics. Another input includes the solution's schedule as defined by the immediacy of the threat. Another possible axis for this trade space is risk, which can be constrained and seen as an independent variable in certain situations, but is usually a function of the three variables of cost, schedule, and military worth.

The benefits of this approach to finding the best solution are:

- We will not constrain the possible solution space prematurely.
- We no longer encounter absolutes that must be met before we go into procurement.

- We can always calculate what a particular solution provides in return for an investment.
- We can make incremental trades that may reduce performance but keep the program alive as long as it will still deliver a required solution to the warfighter.

Existing tools for conveying requirements to industry can help us communicate the dimensions of the requirements trade space. The HQ AFMC Section M template for writing RFPs, for instance, lists technical requirements and supportability, management, and cost as examples of primary evaluation areas. These areas can be tailored to reflect the dimensions of military worth, cost, and schedule. In addition, the Section M template directs the RFP writer to state each area in relative order of importance, allowing us to show the interaction between these variables and how they combine to produce the best value.

This approach to trades also allows us to recognize that the trade space may change and evolve over time. For example, if our knowledge of an enemy changes and along with it the warfighter's requirement, we can make appropriate choices and trades. Without this kind of disciplined and manageable approach to the best solution, decision makers would be faced with the undesirable choice of either ignoring the new threat data or starting the solution development over from the beginning.

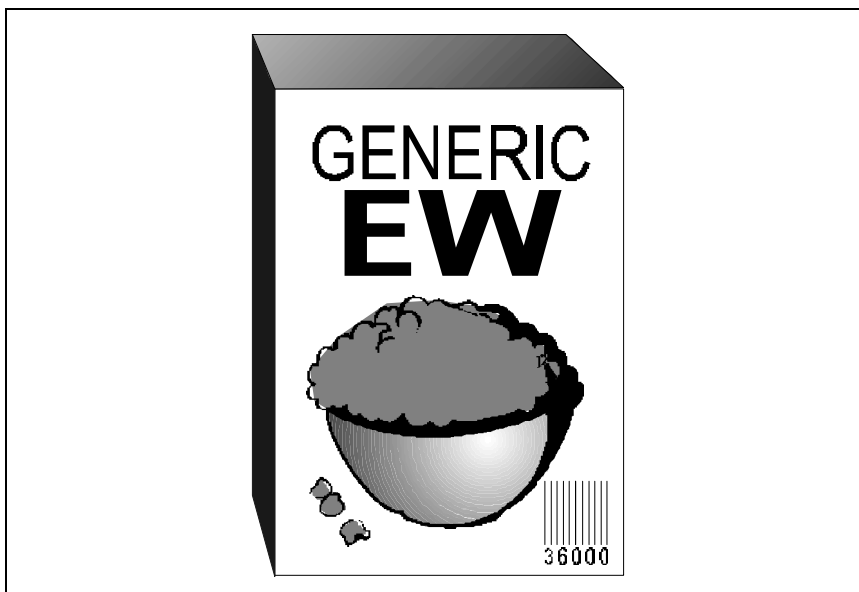
### 7.2.4 Ensure Fair Consideration of Commodity Solutions

Developing commodity solutions is beneficial to the government and to the contractor, allowing both parties to save money. This savings occurs even after the initial acquisition, contributing to financial savings and logistical simplicity throughout the solution's life cycle.

Because government contracts have traditionally failed to provide incentives to the defense industry suppliers and to pursue solutions to similar problems, commodity development and the associated savings and flexibility are not commonplace in government acquisitions.

While some commodity developments may initially be more expensive because of slight cost increases for special fittings or tools, the overall life cycle cost is much lower because the cost of ownership and logistics support is substantially decreased. In addition, commodity development protects the government from

additional costs associated with specialized development, which can include training, spare parts, software, diagnostic equipment, and the exponential cost of differentiated programs worldwide.



**Figure 7-4. Emphasis on Commodity Solutions.** *By ensuring that commodity solutions are fairly considered, we can provide incentives to contractors who offer solutions that provide large savings over the life cycle of a system.*

An example of commodity-oriented acquisition is the Common Missile Warning System (CMWS). The CMWS's goal is to establish a system that is interchangeable across all Army, Navy, Marine, and Air Force non-low observable platforms. In this case, two separate acquisition programs were merged into one joint program to eliminate duplicate development efforts and lower DoD life cycle costs. The Under Secretary of Defense for Acquisition and Technology endorsed the merger, authorized a Milestone II decision based on existing documentation, and waived all but statutory documentation requirements until Milestone III.

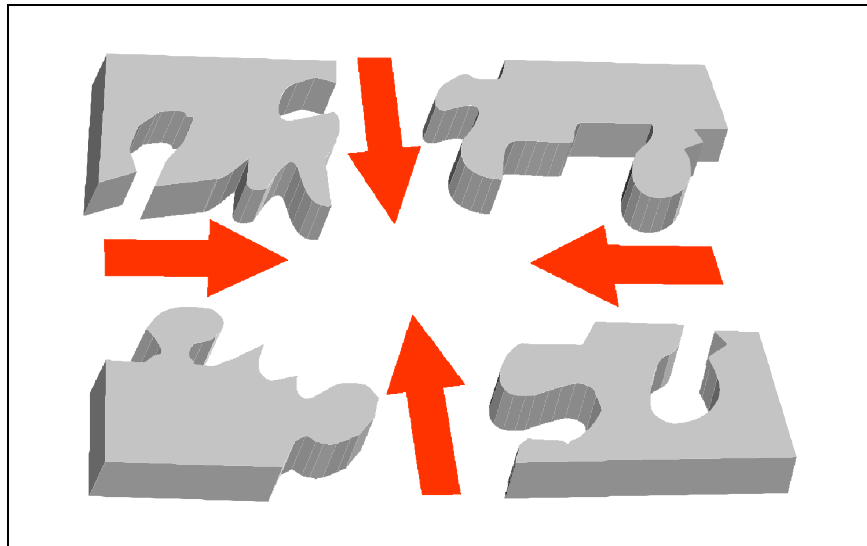
Establishing common solutions for these aircraft makes sense—especially considering the potential serviceability issues and life cycle cost savings that can be achieved. But despite the common aspects of the threat shared by different U. S. Air Force and Navy aircraft, aircraft SPOs have frequently focused on only their own requirements and ended up with different self-protection solutions to what, in many scenarios, is virtually the same problem.

We propose that future government acquisition initiatives include substantial incentives to contractors so that they can provide innovative commodity approaches to meeting EW requirements.

The time to consider such an approach is early in the acquisition life cycle. In stating its requirements, the government must be careful to identify opportunities for common solution applications and incentivize industry to produce solutions that achieve the benefits of the commodity approach.

### 7.2.5 Improve Strategies to Address Integration Issues

Much of the expense of developing and fielding electronic warfare systems occurs when a solution is integrated onto an existing weapons platform. The traditional strategy has been to leave integration issues to the prime contractor. This is often a very expensive methodology, analogous to having your new car radio installed at the car dealership instead of at Joe's Audio Shop.



**Figure 7-5. Addressing Integration Issues.** We will plan early to create an integration strategy that ensures we find the best solution to putting an EW system on a platform.

The same responsible scrutiny employed to develop a better, faster, and cheaper solution within the acquisition process for an electronic warfare subsystem must be applied to ensure that integration activities achieve the same result—a cost-effective solution to the warfighter's need. Following a rigorous process to find integration solutions may improve a program's military worth, minimize risk, and provide benefits throughout the solution's life cycle.

## 7.3 The Step-by-Step Process

The following steps outline how a final RFP is created.

### 7.3.1 Releasing the Draft RFP



Releasing the Draft RFP indicates to industry that the government is nearing a point where it will pay for development of a solution to its requirements. Until now, the government has never formally told industry what the requirement is nor what it is willing to pay for it. The boundaries of the narrowing requirement space are now formally on record.

The Draft RFP consists of several different documents, all of which provide industry with insight into the problem so that they can help develop an innovative solution.

Composing the Draft RFP includes the following:

- Conveying ORD and SRD content
- Conveying the acquisition strategy
- Conveying the Statement of Objectives
- Conveying the evaluation criteria
- Conveying the modeling and simulation toolset
- Conveying the threat and scenarios library

#### Conveying ORD and SRD Content



The results of the previous acquisition activities—quantifying the deficiency and establishing the requirement—are formalized in the ORD or SRD. This document records the necessary level of military worth as well as cost and time constraints. The ORD communicates the warfighter's needs to the entire acquisition community.

The importance of a good ORD cannot be overemphasized. It updates the program baseline and develops performance specifications for the contract during each acquisition phase. All ORDs document key performance parameters and are validated by the operational validation authority. The mandatory format for the ORD has not changed significantly from the previous DoD 5000 series.

*A good ORD updates the program baseline and develops performance specifications during each acquisition phase.*



One of the first tasks of the SPO is to translate the contents of the ORD into a document that can be given to industry in the RFP. This document is the SRD and is essentially the same document as the ORD with contractual language and without any extraneous or sensitive information. Most importantly, it is not a specification that constrains the solution to the contractor community. While the SRD is included in the draft RFP, the ORD is always available to the contractor community.

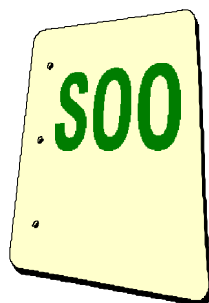
### Conveying the Acquisition Strategy

The acquisition strategy is an internal government document that provides an overview of the major program decisions to date and to come, as well as the manner in which the government will seek development and procurement of a solution to the warfighter's need.

There is no standard format for the acquisition strategy. Program managers should address the acquisition strategy elements in a document of their own design.

The acquisition strategy is included in the single acquisition management plan (SAMP), a consolidated document capturing all the important facets of an acquisition program, including costs, test and evaluation plans, the acquisition program baseline, and other information. The acquisition strategy outlines the types of contracts that the government plans to grant, the development path to be pursued, the risk reduction measures to be taken, and related information.

### Conveying the Statement of Objectives



The Statement of Objectives (SOO) contains the highest-level statement of the tasks the government expects the contractor to perform. It is objective-oriented, articulating what the government wants the final system to do, not how the contractor should go about building it.

Because it documents the objectives but does not indicate how those objectives should be accomplished, the SOO should provide guidance for both interested contractors as well as program managers. All lower-level tasks should have a direct link to accomplishing the higher-level objectives stated in the SOO.

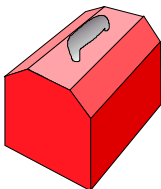
Conveying the Evaluation Criteria

Report Card
A = \$\$\$\$\$
B = \$\$\$\$
C = \$\$\$
D = \$
F = 0

The evaluation criteria developed for a particular RFP should indicate to industry how proposals will be evaluated. These criteria should indicate how various factors—such as past performance, cost, schedule, etc.—will be considered in terms of their relative order of importance. In addition, the evaluation criteria should describe the incentive system that will be used to reward a solution that exceeds minimum requirements.

Because these criteria are included in the Draft RFP, they can be modified during the government/industry interchange that occurs before the final RFP is released. As a result, the evaluation criteria can be tailored in response to what industry says is possible for a given solution.

Conveying the Modeling and Simulation Toolset



In our reengineered process, the RFP provided to industry is accompanied by a standardized modeling and simulation toolset. The government will use these models to evaluate industry’s solutions in terms of the military worth they provide. The modeling and simulation toolset includes a model of the threat environment, scenario data, and the means to link various model inputs and outputs up and down the Military Worth pyramid. Industry uses this toolset to demonstrate their understanding of the Military Worth Method and to show how their solution’s performance aggregates to high-level campaign outcomes.

*The modeling and simulation toolset includes a model of the threat environment, scenario data, and ways to link model inputs and outputs up and down the Military Worth pyramid.*

The common modeling and simulation toolset also highlights the technical attributes that enable the solution’s performance levels claimed by the contractor. A common modeling and simulation toolset focuses government’s technical evaluation on the feasibility of the contractor’s approach.

As the use of this system becomes more commonplace, it will facilitate common databases, common measures and aggregation schemes, and a common understanding of the limits to the data available to make good decisions.

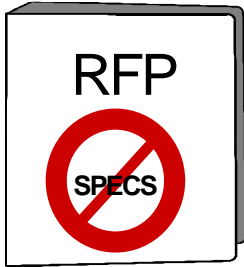
Conveying the Threat and Scenarios Library



With the release of the Draft RFP, authorized contractors have the ability to access various sources of information related to the threat and scenarios library that the military used to develop the requirement. The availability of this information will allow industry to help government refine the warfighter’s requirement and propose more innovative solutions.

We envision that much of this information will be resident at or available through the proposed EW Center of Excellence for Analysis (EWCEA). All such information will be available to all qualified contractors, ensuring equal opportunities for response.

### 7.3.2 Creating an RFP Based on Military Worth



The Military Worth Method affords a means to derive requirements in terms that have meaning to the warfighter. In particular, we plan to use targets at risk (TAR) in most scenarios. While this analytical process may not be perfect, it is a quantum leap over existing methods for two reasons:

- It rests upon a firm operational foundation.
- It establishes strong links between military worth evaluated at the campaign level and the effective functional tasks accomplished by electronic combat systems at lower levels.

With such a methodology in hand and given its focus on what is most valuable to the customer—the warfighter—it should form the basis for evaluating potential solutions. Accordingly, our process is created around this focus. All RFPs will reflect the Military Worth Method and provide industry with the means to create proposals that can be evaluated in military worth terms.

### 7.3.3 Encouraging Government/Industry Interchange



The draft RFP represents a first cut at stating warfighter requirements in contractual terms. Based on the contents of the draft RFP, industry representatives may communicate with government about such things as the requirement space boundaries, the acquisition strategy, the type of proposed contract, the incentive structure, or the modeling and simulation toolset.

This interchange provides industry with the opportunity to voice their questions and concerns and to request changes to be implemented in the final version. Industry will have the ability to ask questions about the effects of certain kinds of proposals while government can gain a better understanding of how industry will try to solve the problem.

The importance of the interchange promoted by the draft RFP process should not be underestimated. It is a critical learning exercise that leads to insights on the part of all parties about the intentions and capabilities of the others.

On the one hand, the government learns about industry's ability to respond, their level of understanding of the problem, and the constraints under which they must work.

Industry, on the other hand, learns just what the government wants, how soon it wants it, how much it is willing to pay, the basis for the requirement, how it will incentivize industry to perform higher-than-usual expectations, how it will choose the source(s) of its solution, and how it will evaluate contract performance.

During this process, we hope to provide a significant amount of room for negotiation and clarification.

### 7.3.4 Releasing the Final RFP

The final occurrence in conveying requirements is the release of the final RFP. This document contains everything included in the draft RFP but incorporates what has been learned during the interchange between government and industry.

The final version of the RFP, though more developed than the Draft RFP, does not contain specifications. While government and industry may be moving toward a consensus on key performance parameters—specifications that provide the best indication of the system's ultimate military worth—the RFP still allows room for industry innovation and, to the greatest extent possible, does not preclude any possible solutions.

With the release of the final RFP, we are ready to move to the next major activity area, selecting the source, where government and industry will continue their collaboration as they develop the best solution to the warfighter's needs.

#### *Summary*

This chapter described how the Partnership Process articulates the warfighter requirements and how they are disseminated to industry. The chapter discusses ORDs, SOOs, and the draft RFP as steps to creating a final Request for Proposal (RFP) that reflects industry insights. Using the Partnership Process to create an RFP will result in innovative solutions to warfighter requirements.